The gp 130 family cytokines IL-6, LIF and OSM but not IL-11 can reverse the anti-proliferative effect of dexamethasone on human myeloma cells.

Juge-Morineau N, Francois S, Puthier D, Godard A, Bataille R, Amiot M

Laboratoire d'Oncogenese Immunohematologique, Inserm U211, Nantes, France.

In order to understand the mechanisms supporting steroid escape in patients with multiple myeloma (MM), three IL-6 autocrine human myeloma cell lines, LP1, OPM2 and L363, have been treated with dexamethasone in the presence or absence of cytokines belonging to the gp 130 family: IL-6, LIF, OSM and IL-11. With pharmacological doses of dexamethasone, a dramatic growth arrest was observed in all the cell lines. IL-6 completely reversed this inhibition. Of note, this IL-6 induced reversion was still seen with very low amounts of IL-6 (12 pg/ml). Finally, whereas LIF and OSM had clear growth-promoting effects on OPM2 only, both cytokines (but not IL-11) reversed the dexamethasone-induced growth arrest in all the cell lines. Therefore the high levels of IL-6 (ng/ml) observed in the MM intermediate milieu and the putative presence of LIF and OSM can easily counteract the effects of dexamethasone in vivo.

PMID: 7647014, UI: 95374925